

CLAIMS

1. A breast pump comprising a body member including
a breast engaging portion shaped to engage a region of a
5 user's breast, a container attached to the body member, and
valve means between the body member and the container,
characterised by, within the body member, a sleeve sealing
the interior of the body member from the atmosphere, the
sleeve being selectively movable from a rest condition to a
10 displaced condition by actuating means operatively
connected to the sleeve, movement of the sleeve from the
rest condition to the displaced condition creating an
increasing volume of reduced pressure within the body
member whereby firstly the valve means is closed to prevent
15 evacuation of the container, and whereby milk is expressed
by the user into the body member, and return movement of
the sleeve from the displaced condition to the extended
condition releasing the reduced pressure allowing the valve
to open the expressed milk flowing through the valve means
20 and into the container, the configuration of the sleeve or
the material of the sleeve being such as to substantially
prevent stretching of the sleeve on movement between the
rest and displaced conditions.

2. A breast pump as claimed in claim 1 in which the
25 sleeve is of generally concertina shape, and is selectively

movable between an extended rest condition and a compacted displaced condition.

3. A breast pump as claimed in claim 2 in which the concertina shape has a closed base thereto at least part of which is substantially rigid, movement of the sleeve being by pulling the base from inside the sleeve so as to contract its length.

4. A breast pump as claimed in any one of claims 1 to 3 in which the concertina sleeve is of an elastic material the inherent properties of which are such that, on release of the actuating means by the user, the sleeve returns to its extended condition within the body member.

5. A breast pump as claimed in claim 1 in which the sleeve comprises a substantially non-stretch material.

6. A breast pump as claimed in claim 5 in which the sleeve includes a flexible layer to which is bonded or which is inlaid with a substantially non-stretch layer.

7. A breast pump as claimed in any one of claims 1 to 6 in which the actuating means comprises a lever arm pivotally mounted at an intermediate region thereof to the body member, one end extent of the lever arm being for engagement by the user, and the other end extent being operatively connected to the sleeve.

8. A breast pump as claimed in any one of claims 1 to 7 in which one end of the sleeve is secured between a

collar and a defining wall of the body member whereby the interior of the sleeve is sealed from the interior of the body member, the other end of the sleeve being closed.

9. A breast pump as claimed in claim 8 in which the
5 other, closed end of the sleeve carries an end plate, a link pin extending axially within the sleeve and through the collar to interconnect the end plate and the other end extent of the lever arm whereby, on pivoting movement of the lever arm by the user, the link pin is moved
10 substantially axially of the sleeve to compact the sleeve.

10. A breast pump as claimed in claim 9 in which the end plate, link pin, sleeve and lever arm comprise an integral unit.

11. A breast pump as claimed in claim 10 and
15 incorporating flexible joints at one or both ends of the link pin.

12. A breast pump as claimed in any one of claims 1 to 6 in which the actuating means comprises an operating member one end of which is secured to a closed end of the
20 sleeve and the other end of which carries a thumb-receiving element for receiving the thumb of a user.

13. A breast pump as claimed in claim 12 in which a handle member is provided as a rest and grip for the fingers of the actuating hand, said handle being rigidly
25 secured to the pump body, the arrangement being such that,

on location of the thumb in the thumb-receiving element, and on pulling of the thumb towards the fingers, the base of the sleeve is pulled in the direction generally away from the breast.

5 14. A breast pump as claimed in any one of claims 1 to 13 in which the valve means between the body member and the container comprise a duck bill type one way valve.

10 15. A horn for a breast pump, the horn being shaped to engage a region of a user's breast, and being of a rigid material and having bonded thereto at least one region of soft, elastic material the soft material of the or each region infilling an associated aperture through the rigid material to comprise the thickness of the horn at said region.

15 16. A horn as claimed in claim 15 in which the rigid material is polypropylene or polycarbonate, and the soft elastic material is a thermoplastic elastomer.

20 17. A horn as claimed in claim 15 or claim 16 in which there are two opposed regions of soft, elastic material remote from the open end of the horn, one for location above the breast and one for location below the breast adjacent the nipple for manipulation by the thumb and a finger of the user.

18. A horn as claimed in any one of claims 15 to 17
in which the whole of the internal area of the rigid
material is lined with said soft material.

19. A horn as claimed in claim 18 in which the outer
5 peripheral edge of the horn comprises a lip of said soft
material encasing the periphery of the rigid material.

20. A horn as claimed in any one of claims 15 to 19
and comprising a two-shot moulding with the soft, elastic
material permanently bonded to the rigid material by virtue
10 of the inherent characteristics of the materials.